

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
27 January 2005 (27.01.2005)

PCT

(10) International Publication Number
WO 2005/006986 A1

(51) International Patent Classification⁷: **A61B 6/03, 6/06**

(21) International Application Number:

PCT/IB2004/002352

(22) International Filing Date: 15 July 2004 (15.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/489,130

22 July 2003 (22.07.2003)

US

(71) Applicant (for all designated States except US): **KONINKLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MATTSON, Rodney, A.** [US/US]; 595 Miner Road, Cleveland, OH 44143 (US). **BRUNETT, William, C.** [US/US]; 595 Miner Road, Cleveland, OH 44143 (US).

(74) Common Representative: **KONINKLIJKE PHILIPS ELECTRONICS N.V.**; C/O LUNDIN, Thomas, M., 595 Miner Road, Cleveland, OH 44143 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

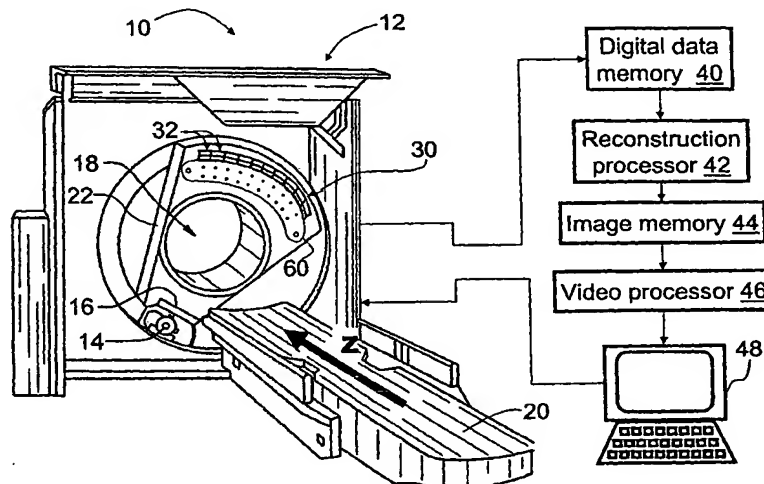
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **RADIATION MASK FOR TWO DIMENSIONAL CT DETECTOR**



(57) Abstract: A radiation detector (30) for a computed tomography scanner (12) includes a plurality of radiation detector modules (32). Each detector module (32) includes an anti-scatter module, at least one radiation absorbing mask (120) and a detector subassembly module (100). The anti-scatter module (32) includes radiation absorbing anti-scatter plates (80). The detector subassembly module (100) includes a substrate (102) and an array (104) of detector elements. The radiation absorbing mask (120) is a photoetched grid, formed of a radiation absorbing material and is positioned between the anti-scatter module (78) and the detector elements of array (104). The strip of the grid, that is parallel to the anti-scatter plates (80), is wider than each anti-scatter plate (80). The detector module (32) is aligned with a spatial focus (74) by inserting the alignment pins (160) into the alignment openings (128) of the radiation absorbing mask (120) and the alignment openings (162) of the detector subassembly module (100).